

Covering
years
1895-1923

total
Gold King Mine
for filing

EXCERPTS FROM ENGINEERS REPORTS

The Gold King Mine at Gladstone, Colorado, is a celebrated producer. During twenty-two years of operation the mine records show a total recovery of \$8,385,407.10. This is not gross value of crude ore produced, but "recovery" value, and gives an average of \$13.21 per ton.

During some years of this time leasers operated the property and much high grade ore is unaccounted for. Engineering estimates place at between \$12,000,000 and \$13,000,000, the total ore produced, and its average value at between \$15.00 and \$20.00 per ton.

Control of the mine was owned by two men who died during the same year. Their estates gave up active operation of the mine, discharged its operating executives and personnel and leased the property to "leasers" whose selfish interest lay in taking out the greatest amount of high grade ore possible, paying the minimum of royalty and spending as little as possible on maintenance of equipment.

The mine was developed from its inception in 1895 by Mr. W. Z. Kinney. The years 1895 and 1896 were devoted to development with practically no ore production. The bulk of the mine's large known production was made under Mr. Kinney's active management between the years 1897 and 1908, inclusive.

In 1917 Mr. Kinney was active in the formation of the Gold King Extension Company under the laws of Colorado, which acquired

two hundred and sixty acres of claims immediately adjoining the Gold King Mine property on the north and known as the Gold King Extension territory. In 1918 this new company purchased the Gold King mine, property and equipment, including its eighty stamp mill, power plants, machine shops, etc.

Due to war conditions it was at the time extremely difficult to operate and soon became impossible to do so because of the lack of men and the prohibitive cost of supplies.

Early in 1923 the principals at interest determined to operate on a large scale the consolidated properties which consisted of a total of 375 acres to which title has been granted by the U. S. Government, and extensive tunnel rights embracing additional valuable acreage described in the engineer's reports

Although a considerable volume of ore has been taken from the Gold King properties it is the opinion of reliable engineers that the ore reserves of the old Gold King property have been hardly scratched. The Gold King workings have been extended into the large area formerly known as the Gold King Extension and which are virgin territory. These workings have developed that not only do the Gold King veins extend into the Gold King Extension territory but that the grade of ore improves. In addition, there have been encountered in the Extension territory two additional twin vein systems very large in extent and of an average grade of ore much richer than in all the previous history of the mine.

The consolidated properties are considered by excellent

Engineering opinion to be the richest in all the San Jaun district, famous for hundreds of millions of dollars of gold and silver ore produced. In face, engineering opinion has stated that these consolidated properties very probably comprise the richest ore bodies so far discovered in the entire world.

The mining cost are extremely low since the workings enter Bonita Mountain laterally on eight different levels, giving natural drainage without pumping, the ore being delivered to the lowest working by chute, hauled by car over a level track to the portal and lowered by overhead tramway to the mill. Thus there is none of the expensive hoisting operations usually associated with mining. There is an abundance of timber, water and electric power at the mine.

Over ten miles of workings extend through the consolidated properties, making a great tonnage of profitable ore available for breaking down and milling at any time. There has been expended over \$6,000,000, (put back from earnings) in developing these workings, following veins, stopes, drifts and crosscuts, etc., and in the 80 stamp mill, machine shop, miners' quarters, and other equipment.

Although the record of more than twenty years of operation show that extensive pockets of ore very rich in gold content are constantly encountered, engineers consider this mine purely as a problem in quantity production of ore of a known minimum value at a known maximum cost of operation, with ore reserves sufficient

for over twenty years of full production of the maximum output contemplated; i.e. 5,000 tons per day.

During twenty-two years time no climatic conditions have ever been encountered to cause a shut-down of mill or mine. The mill has an actual record of operating 364 days out of 365.

Over a period of twenty-two years the average "recovery" value of ore produced was \$13.21 per ton. Mr. Kinney, Vice President and General Manager, reports that the ore which they partially worked is richer than ever before in the history of the mine, runs a minimum of \$15.00 per ton and as high as \$160.00 per ton, and that this single ore body has a cubic content so large that it could not be worked out for many years even at a daily mill capacity of 5,000 tons. This is only a fraction of the reserves of the mine.

The mine workings contain many pockets very rich in values. During 1903 Mr. Kinney took out \$1,500,000 from a single pocket.

As shown by Mr. Kinney the workings recently cut a rich ore shoot which assayed clear across the vein over \$1400. per ton. This shoot seems to extend between the Seventh Level and the American Tunnel, a distance of 865 feet. It is 8 feet thick and 200 feet long, with a cubic content of over 158,000 tons.

Mr. Kinney through his many years of daily work in the mine is convinced that this ore will run uniform in values between these two points since he has encountered not a few similar shoots, although much smaller in cubic content.

"The Upper Works" consist of seven levels, the 7th which is the lowest, is at its portal, over 3/4 of a mile from the mill level, up the side of a steep precipitous mountain and is connected, as stated by tram.

The first work done upon the property was upon No. 1, where a crosscut tunnel was driven from the surface and the Gold King vein encountered. The vein was followed for a distance of 1,000 feet and at this point, which is 250 feet from the surface a shaft was sunk and at this time is driven to a depth of 750 feet.

At intervals of 100 feet, levels were started from the shaft drifting both ways, upon the ore bodies, which were encountered upon each of the seven levels and are continuous.

Level No. 1, Driven east and west of shaft 1,000 feet.
Level No. 2, Driven east and west of shaft 1,000 feet
Level No. 3, Driven east of shaft 1500 ft., west 1,000 ft.
Level No. 4, Driven east and west of shaft 1,500 feet.
Level No. 5, Driven east of shaft 300 ft., west 2100 ft.
Level No. 6, Driven east of shaft no ft., west 200 ft.
Level No. 7, Driven east of shaft 3500 ft., west 500 ft.

A 700 foot- Double Compartment shaft is fitted with double electric driven hoists with all necessary machinery for operation including electric bells, electric signals, and telephone connections. The Plant is located upon Level No. 1.

Each level is fully equipped with ore chutes and bins, from which the ore is dropped down to No. 7, where it is conveyed in cars to the portal of No. 7, and then by tram to ore bins at the Mill for treatment.

The seven levels are equipped with cars, tracks, electric wired, and air line pipe. This equipment cost over \$255,000.00.

From the compartment shaft on No. 7, downward 900 feet, on the King ore body, the breast of the mill tunnel will be encountered. When this connection is made, all the ore will be conveyed out through the lower workings, or mill tunnel; then the tramway boarding house and works upon No. 7 will be done away with and everything will be centered at Gladstone, and thereby cheapen the cost of production.

It is estimated that the ore taken out, in constructing the shaft for the 900 feet will make a profit over cost of construction.

The 5th level has been driven west 2,100 feet and it is considered that this level is 100 feet on the Gold King Extension property.

The ore bodies are practically continuous throughout, and are known as the "Gold King", "Davis", "Sampson", "Blanket" and "No Name". The ore is chiefly low grade, but quite uniform, although exceedingly high grade streaks are occasionally encountered in which large quantities of free gold raise the value to high figures.

The Mill at Gladstone has a length of 465 feet, the tailings plant being 73 feet wide, the balance of the mill 50 feet wide, the total floor space being about 25,000 square feet.

The Mill and equipment it is said cost about \$350,000. It has 80 stamps, a Gates Gyratory Crusher, from which a belt conveyor takes the ore to the bins above the stamps.

Each of the 80 stamps weighs 950 pounds and has a speed of 100 drops per minute.

Amalgamating plates catch the free gold as the ore passes from the stamps.

Sixteen concentrating tables then handle the ore, the slimes passing to tanks from which they are pumped to the tube mills for regrinding.

The concentrates are dried upon a concrete drying floor and are then ready for shipment.

To the mill has been added an oil flotation plant which is said to have cost about \$40,000.00.

The entire plant is heated by steam for which two of the five boilers are used.

The property now has practically 500,000 tons of ore in sight, and at the rate of milling 300 tons per day, would last nearly five years.

The ore that may be developed cannot be estimated as from the shaft west, above the 7th level, from the breast of the new seven levels, it is an average of about 7 to 8 hundred feet to the endline of the Gold King Properties, then, in addition, there is about 200 feet on the Gold King Extension.